

EXHIBIT 4

**IN THE UNITED STATES DISTRICT COURT
FOR THE EASTERN DISTRICT OF TEXAS
MARSHALL DIVISION**

XR COMMUNICATIONS, LLC, dba
VIVATO TECHNOLOGIES,

Plaintiff,

vs.

AT&T SERVICES INC., ET AL.,

Defendants.

ERICSSON, INC. ET AL.,

Intervenors.

Case No. 2:23-cv-00202-JRG-RSP

(LEAD CASE)

JURY TRIAL DEMANDED

**DEFENDANTS'/INTERVENORS' DISCLOSURE OF CLAIM TERMS
PURSUANT TO LOCAL PATENT RULE 4-2**

Pursuant to the Court's Docket Control Order (*see* Dkt. 40) and the Rules of Practice for Patent Cases for the Eastern District of Texas ("Local Patent Rules" or "P.R."), Defendants AT&T Corp., AT&T Mobility LLC, and AT&T Services, Inc. (the "AT&T Defendants" or "AT&T"), Verizon Communications, Inc. and Cellco Partnership d/b/a Verizon Wireless (the "Verizon Defendants" or "Verizon"), T-Mobile USA, Inc. (the "T-Mobile Defendants" or "T-Mobile"), Ericsson, Inc. ("Ericsson"), and Nokia of America Corporation ("Nokia") (collectively, "Defendants/Intervenors") hereby provide the following disclosures related to the proposed preliminary constructions of certain claim terms of U.S. Patent Nos. 7,177,369 (the '369 Patent); 8,289,939 (the '939 Patent); 8,737,511 (the '511 Patent); and 10,715,235 (the '235 Patent) (collectively, the "Asserted Patents"). More specifically, the following disclosures focus on claims 1, 2, 9, 10, 12, 13, 15, 19, 21, 32, 33, and 41 of the '369 Patent; claims 15, 20-21, 30, and 33-34 of the '939 Patent; claims 1, 2, 10, 11, 19, and 20 of the '511 Patent; and 1, 2, 4, 8, 12, 15, 16, 18, and 19 of the '235 Patent.

The proposed terms, phrases, or clauses for construction set forth below address the claims of

the Asserted Patents that Plaintiff XR Communications, LLC, dba Vivato Technologies (“Plaintiff” or “XR”) asserted collectively against Defendants/Intervenors pursuant to Local Patent Rule 3-1 (“Infringement Contentions”). The proposed terms, phrases, or clauses are identified for construction wherever they appear in any claim element in any of the Asserted Patents, including all dependent claims or claims where multiple terms appear in combination. Defendants/Intervenors propose only the terms and claim elements for construction that appear in the claims asserted against them in Plaintiff’s Infringement Contentions. Nothing in this disclosure shall be construed to waive Plaintiff’s requirement to assert a claim against Defendants/Intervenors pursuant to Local Patent Rule 3-1.

The proposed terms, phrases, or clauses for construction are based on information reasonably available to Defendants/Intervenors at this time. Defendants’/Intervenors’ investigation and discovery are ongoing, and Defendants/Intervenors therefore expressly reserve the right to amend, modify, and add to this list of terms based on continuing investigation and discovery. Further, Defendants/Intervenors reserve the right to modify this disclosure once it has reviewed Plaintiff’s concurrently proposed claim constructions and in light of arguments made or positions taken by Plaintiff during the meet and confer process and as this case proceeds.

Additionally, the inclusion of any claim terms, phrases, or clauses on this list is not intended to and does not constitute an admission that the term or phrase is capable of construction and not indefinite under 35 U.S.C. § 112, lacking enablement or adequate written description, or otherwise incapable of construction. For example, Defendants/Intervenors reserve the right to argue that a particular claim term is indefinite and/or fails to satisfy the written description and enablement requirements, regardless of whether the term has been proposed for construction, has not been proposed for construction, and/or was initially proposed for construction but has since been dropped from the terms proposed for construction.

Pursuant to Patent Local Rule 4-2(a) and (b), Defendants/Intervenors provide below their proposed preliminary constructions for each claim term/phrase proposed by Defendants/Intervenors and Plaintiff. Defendants/Intervenors further identify a list of exemplary claims within which the term, phrase, or clause is found. The identified claims listed in this disclosure are representative. A construction of a term, phrase, or clause applies equally to variations or other instances of that term,

phrase, or clause in any of the asserted claims in the asserted patents. Furthermore, to the extent a term, phrase, or clause renders a claim indefinite, all claims depending from that claim are similarly indefinite.

Defendants/Intervenors have also identified any supporting extrinsic evidence including, without limitation, dictionary definitions, citations to learned treatises and prior art, and testimony of percipient and expert witnesses. Defendants/Intervenors reserve the right to amend or otherwise supplement their identification of supporting evidence that may be used to support, describe, or explain Defendants'/Intervenors' proposed preliminary claim constructions. Defendants/Intervenors further reserve the right to identify additional extrinsic evidence that is obtained through further discovery in this matter.

While it is not extrinsic evidence, Defendants/Intervenors may also rely on the file histories of the patents in suit and the file histories of any domestic or foreign related patents. Defendants/Intervenors may also rely on Plaintiff's Infringement Contentions and materials cited therein, and Defendants'/Intervenors' Invalidity Contentions and materials cited therein. Further, Defendants/Intervenors may rely on any declarations, reports, or testimony by the named inventors or experts on behalf of Plaintiff in this case, other cases, or Patent Office proceedings, regarding the asserted technology. With respect to expert testimony, Defendants/Intervenors state that they may offer the testimony of James Proctor. Further, in addition to the testimony specifically identified below, Defendants/Intervenors reserve the right to provide expert testimony relating to any issue on which Plaintiff offers expert testimony.

Pursuant to Patent Local Rule 4-2(c), Defendants/Intervenors are prepared to meet and confer with Plaintiff at a mutually agreeable time for the purposes of finalizing a combined list, narrowing or resolving differences, and facilitating the ultimate preparation of a Joint Claim Construction and Prehearing Statement.

I. The '369 Patent

Proposed Terms For Construction	Proposed Construction	Evidence
“forward path pre-equalization parameter” (1, 13, 21, 32, 33, 41)	plain and ordinary meaning	<u>Extrinsic Evidence:</u> Any extrinsic evidence relied upon by Plaintiff. All papers, expert declarations, and evidence submitted in related IPR proceedings
“modifying a forward path data signal that is to be transmitted to the receiving device based on said at least one forward path pre-equalization parameter” (1)	plain and ordinary meaning	<u>Extrinsic Evidence:</u> Any extrinsic evidence relied upon by Plaintiff. All papers, expert declarations, and evidence submitted in related IPR proceedings
“identifying at least one multipath transmission delay within a <i>reverse path data signal</i> received from a receiving device” “reverse transmission path” “reverse path data signal” (1, 2, 9, 10, 12, 13, 15)	Plain and ordinary meaning	<u>Extrinsic Evidence:</u> Any extrinsic evidence relied upon by Plaintiff.
“substantially reciprocal to” (12)	indefinite term of degree	<u>Extrinsic Evidence:</u> Expert testimony of Jim Proctor regarding the uncertainty of this term of degree. Any extrinsic evidence relied upon by Plaintiff.
“a plurality of <i>first device</i> receive antennas” (19)	indefinite	<u>Extrinsic Evidence:</u> Expert testimony of Jim Proctor regarding the uncertainty of first device as used in the context of this limitation in view of surrounding claim language

Proposed Terms For Construction	Proposed Construction	Evidence
“said at least one transmission delay” (1, 21, 41)	“the at least one multipath transmission delay”	

II. The '939 Patent

Proposed Terms For Construction	Proposed Preliminary Construction	Evidence
“wireless input/output (I/O) unit” (15, 30)	Governed by 35 U.S.C. § 112, ¶6, and indefinite Function: “establish a plurality of access points” Structure: None disclosed	<u>Extrinsic Evidence:</u> Expert testimony of Jim Proctor regarding the understanding of a person skilled in the art at the time of invention regarding the claim term and the absence of corresponding structure disclosed in the specification. Any extrinsic evidence relied upon by Plaintiff.
“signal transmission/reception coordination logic” (15, 30)	Governed by 35 U.S.C. § 112, ¶6, and indefinite Function: Claim 15: “ascertaining, by monitoring the plurality of access points for received signals, that:” (i) “a first access point of the plurality of access points is receiving a first signal on a first channel,” (ii) “a second access point of the plurality of access points is receiving a second signal that is ongoing on a second channel,” (iii) “restrain[ing] at least a third access point of the plurality of access points from transmitting a third signal on a third channel responsive to the ascertaining that the first access point is receiving the first signal and that the second access point is receiving the second signal that is ongoing-on the second channel, wherein the restraining at least the third access point prevents degradation to the first and second	<u>Extrinsic Evidence:</u> Expert testimony of Jim Proctor regarding the understanding of a person skilled in the art at the time of invention regarding the claim term and the absence of corresponding structure disclosed in the specification. Any extrinsic evidence relied upon by Plaintiff.

Proposed Terms For Construction	Proposed Preliminary Construction	Evidence
	<p>signals”</p> <p>Structure: None disclosed</p> <p>Claim 30: (i) “ascertaining, by monitoring the plurality of access points for received signals, that a first access point of the plurality of access points is receiving a first signal on a first channel” and (ii) “restrain[ing] at least a second access point of the plurality of access points from transmitting a second signal on a second channel different from the first channel responsive to the ascertaining that the first access point is receiving the first signal.”</p> <p>Structure: None disclosed</p>	
<p>“restrain . . . responsive to the ascertaining that the first access point is receiving the first signal and that the second access point is receiving the second signal that is ongoing-on the second channel”</p> <p>“restrain . . . responsive to the ascertaining that the first access point is receiving the first signal”</p> <p>(15, 30)</p>	<p>plain and ordinary meaning, <i>i.e.</i>, “while the first access point is ascertained to be receiving the first signal and the second access point is ascertained to be receiving the second signal that is ongoing-on the second channel”</p> <p>plain and ordinary meaning, <i>i.e.</i>, “while the first access point is ascertained to be receiving the first signal”</p>	<p><u>Extrinsic Evidence:</u></p> <p>Any extrinsic evidence relied upon by Plaintiff.</p>
<p>“the access point”</p> <p>(20-21, 33-34)</p>	<p>indefinite for lack of certain antecedent basis, <i>i.e.</i>, first or second</p>	<p><u>Extrinsic Evidence:</u></p> <p>Any extrinsic evidence relied upon by Plaintiff.</p>

III. The '511 Patent

Proposed Terms For Construction	Proposed Preliminary Construction	Evidence
<p>“bi-directional beam[.]”</p> <p>(1, 10)</p>	<p>“a beam on which (i) the transmitter transmits and (ii) the receiver receives”</p>	<p><u>Extrinsic Evidence:</u></p> <p>Joseph C. Liberti, Jr. & Theodore S. Rappaport, “Smart</p>

Proposed Terms For Construction	Proposed Preliminary Construction	Evidence
		Antennas for Wireless Communications: IS-95 and Third Generation CDMA Applications” Prentice Hall 1999, § 3.5. E. Biglieri et al., “MIMO Wireless Communications,” Cambridge University Press 2007, pp. 91, 131-132, available for inspection upon request. Any extrinsic evidence relied upon by Plaintiff.
“n multiple-input multiple-output transceivers (MIMO)” (1, 10)	“a single unit comprising a MIMO transmitter and a MIMO receiver, with common circuit components”	<u>Extrinsic Evidence:</u> IPR2022-00613, Paper No. 17 (Jan. 14, 2023) IPR2022-00613, Paper No. 33 (July 5, 2023) IPR2022-00613, Ex. 2024 (July 17, 2023) Any extrinsic evidence relied upon by Plaintiff.
“MIMO transmitter configured to process . . .” “Z-th MIMO transmitter” “n multiple-input multiple-output transmitters (MIMO)” “a Z-th MIMO transmitter” (1, 10, 20)	“transmitter that processes MIMO signals for transmission”	<u>Extrinsic Evidence:</u> Any extrinsic evidence relied upon by Plaintiff.
“MIMO receiver configured to process . . .” “j-th MIMO receiver” “n multiple-input multiple-output receivers (MIMO)” (1, 10, 19)	“receiver that processes received MIMO signals”	<u>Extrinsic Evidence:</u> Any extrinsic evidence relied upon by Plaintiff.

Proposed Terms For Construction	Proposed Preliminary Construction	Evidence
<p>“2nd Generation Partnership Project (3GPP) Long Term Evolution (LTE), 3GPP LTE-Advanced, 3GPP LTE-TDD, 3GPP LTE-FDD”</p> <p>(2, 11)</p>	<p>“one of the 3GPP LTE, LTE-Advanced, LTE-TDD or LTE-FDD standards that existed at the time of the invention”</p>	<p><u>Extrinsic Evidence:</u></p> <p>Any extrinsic evidence relied upon by Plaintiff.</p>

IV. The '235 Patent

Proposed Terms For Construction	Proposed Preliminary Construction	Evidence
<p>“transmission nulls”</p> <p>(2, 4, 8, 12, 16)</p>	<p>Plain and ordinary meaning wherein the plain-and-ordinary meaning is “portions of a transmission pattern where transmissions of no or insignificant energy are selectively directed.”</p>	<p><u>Extrinsic Evidence:</u></p> <p><i>XR Communications, LLC v. D-Link Sys., Inc. et al</i>, No. 8:17-cv-00596-DOC-JDE, Dkt. 251 (C.D. Cal. Nov. 16, 2021)</p> <p>Any extrinsic evidence relied upon by Plaintiff.</p>
<p>“the set of weighting values is configured to be used by the remote station to construct one or more beam-formed transmission signals”</p> <p>“the set of weighting values is configured to be used by the transceiver to construct one or more beam-formed transmission signals”</p> <p>(1, 8, 15)</p>	<p>plain and ordinary meaning</p>	<p>Any extrinsic evidence relied upon by Plaintiff.</p>
<p>“transceiver”</p> <p>(1, 8, 15)</p>	<p>“a single unit comprising a transmitter and a receiver, with common circuit components”</p>	<p><u>Extrinsic Evidence:</u></p> <p>IPR2022-00613, Paper No. 17 (Jan. 14, 2023)</p> <p>IPR2022-00613, Paper No. 33 (July 5, 2023)</p> <p>IPR2022-00613, Ex. 2024 (July 17, 2023)</p>

Proposed Terms For Construction	Proposed Preliminary Construction	Evidence
		Any extrinsic evidence relied upon by Plaintiff.
“the processor configured to: (1, 15)	<p>Governed by 35 U.S.C. § 112, ¶6, and indefinite</p> <p>Functions: (i) “receive a [first and second] signal transmission . . . determine [first and second signal informations from first and second signal transmissions]” and (ii) “determine a set of weighting values based on the [first and second] signal information, wherein the set of weighting values is configured to be used by the transceiver to construct one or more beam formed transmission signals; cause the transceiver to transmit . . .”</p> <p>Structure: none disclosed</p>	<p><u>Extrinsic Evidence:</u></p> <p>Expert testimony of Jim Proctor regarding the understanding of a person skilled in the art at the time of invention regarding the claim term and the absence of corresponding structure disclosed in the specification.</p> <p>Any extrinsic evidence relied upon by Plaintiff</p>

[SIGNATURES APPEAR ON FOLLOWING PAGE]

Dated: May 15, 2024

Respectfully submitted,

/s/Matthew S. Yungwirth

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CERTIFICATE OF SERVICE

I hereby certify that on May 15, 2024, the foregoing document was served upon counsel of record for plaintiff in this instant action via e-mail.

/s/ Matthew S. Yungwirth

Matthew S. Yungwirth